## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 6 October 2005 (06.10.2005)

**PCT** 

## (10) International Publication Number WO 2005/093112 A1

(51) International Patent Classification<sup>7</sup>: C22C 38/22, 38/30, 38/44, 38/52

(21) International Application Number:

PCT/SE2005/000422

**(22) International Filing Date:** 22 March 2005 (22.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 0400806-6 26 March 2004 (26.03.2004) SE

- (71) Applicant (for all designated States except US): SAND-VIK INTELLECTUAL PROPERTY AB [SE/SE]; S-811 81 Sandviken (SE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): NILSSON, Jonas? [SE/SE]; Seegatan 9 B, S-811 33 Sandviken (SE). ROSBERG, Andreas [SE/SE]; Skomakargatan 24, S-803 23 Gävle (SE).
- (74) Agent: MELIN, Linda; Sandvik AB, Intellectual Property, S-811 81 Sandvik (SE).

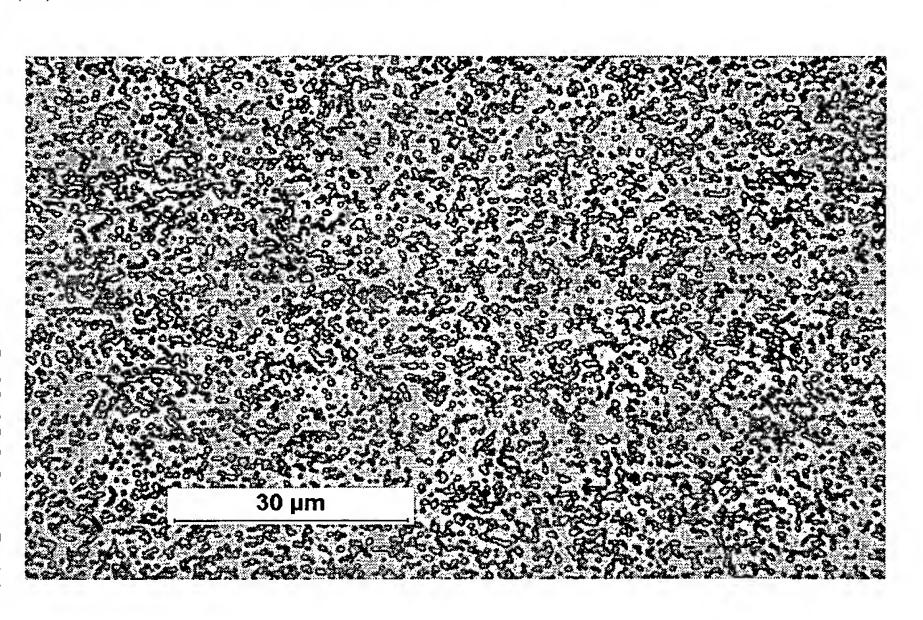
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## **Published:**

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: STEEL ALLOY FOR CUTTING DETAILS



(57) Abstract: The invention relates to a steel alloy of the following composition (in % by weight) C 0,40-0,60 Si 0,1-1,0 Mn 0,3-1,0 Cr 12-15 MO 2,5-4,0 Ni 0-1,0 Co 0-4,0 N 0,15-0,20, with the balance Fe as well as normally occurring impurities, the hardness being > 56 HRC, which has been attained without deep freezing, as well as PRE > 25, defined as  $PRE = \% Cr + 3.3 \cdot \% Mo + 16$ • % N. Furthermore, the steel alloy comprises carbides, nitrides and/or carbonitrides the maximal diameter of which does not exceed 5 µm. This steel alloy has turned out surprisingly well suitable as edge material for a plurality of cutting operations.

**NO 2005/093112 A1 |||||**